TASMAN.
ACCESS FLOORS

Specification sheet: B25-FC100

PROJECT

APPLICATION	General Office Environment requiring extra lateral stability
ACCESS FLOOR	Fibrecore B25 'Standard-Duty' Bolted-Stringer System

SPECIFICATION DETAILS:

PANEL TYPE:	Fibrecore **B25** Panel &
UNDERSTRUCTURE TYPE:	Fibrecore **FC100** 'Standard-Duty' Bolted Stringer Understructure at ……mm finished floor height

DESCRIPTION OF B25-FC100 ACCESS FLOOR SYSTEM

The B25 'Standard-Duty' Bolted-Stringer Access Floor System forms a 'bare' surface finish and a very stable surface by combining 'B25' panels within a bolted-stringer understructure. The panels are gravity-held and are supported by the understructure to provide lateral stability and easy underfloor access. This access floor system is rarely specified because there are few applications requiring a 'bare' surface finish and a bolted-stringer understructure.

PERFORMANCE SUMMARY

Application	A general office environment requiring extra lateral stability where people, workstations and normal office equipment will occupy the space. The space is likely to be subject to equipment loads, normal levels of foot traffic, and infrequent rolling loads in the office corridors and aisleways.
Performance	The access floor will have a safety factor of three times the concentrated (design) load, and is capable of meeting heavy-duty static loads and medium-duty dynamic loads per AS 4154 - 1993 Australian Standard - General Access Floors.
Finished Floor Height	The finished floor height of the access floor, measured from the sub-floor to the top surface of the access floor, shall be as shown in the contract drawings.
Surface Finish	The access floor shall have a 'bare' panel surface finish ready to accept on-site floor covering supplied by others.
Installation	The access floor will be rigid, free from vibration and rocking panels within a ±3.0mm level over the entire space. Panels will be accurately cut to fit around all permanent features.
Fire Rating	Fire hazard indices shall be tested per Australian Standard AS 1530 Part 3, including Ignitability, Spread of Flame, Heat Evolved, and Smoke Developed.
Maintenance	All whole panels will be interchangeable allowing for any future changes. The access floor will maintain these original conditions when runs of panels have been removed for normal underfloor access.

Performance to Standards Guide per AS 4154 - 1993 Australian Standard - General Access Floors

Fibrecore B25-FC100 Access Floor System			Static Performance Loads		Dynamic Performance Loads		Impact Load
'B25' Panel Surface Finish	Type of Understructure	Tasman Specification Code	Concentrated Load 25mm square	Ultimate Load 25mm square	75mm x 45mm 10 passes	150mm x 50mm 10,000 passes	25mm square
Bare	Standard-Duty Bolted-Stringer	B25-FC100	4.5 kN	13.5 kN	4.4 kN	2.7 kN	45 kg

Reference 1kN = 102kg

1. GENERAL

WORK INCLUDED

The access floor contractor shall provide submittals, materials and installation of the access floor system as shown on the contract drawings and as specified in this document.

RELATED WORK NOT INCLUDED

The builder or general contractor shall provide clear access, dry secure storage and a clean sub-floor area which is free of construction and other trades debris during the installation of the access floor system.

The area to receive the access floor shall be enclosed and be maintained at a temperature range of 5ºC to 32ºC in a relative humidity range of 20% to 70%.

The concrete dust sealer (if any) shall be compatible with the access floor pedestal adhesive.

The electrical contractor shall provide necessary material and labour to electrically connect the access floor to the building earth.

SYSTEM DESCRIPTION

The access floor system shall consist of interchangeable square panels of a nominal 600mm x 600mm dimension. The panels shall be selected to meet specific load requirements as detailed in Part 3 of this specification.

The panels shall be supported by bolted-stringers joined to adjustable corner pedestal assemblies.

The understructure system will be as defined under Part 2 of this specification.

The finished floor height of the system above the sub-floor shall be as shown in the contract drawings.

SHOP DRAWINGS AND PRODUCT DATA

The access floor contractor shall submit drawings showing the complete access floor system including floor panel layout and all accessories that are part of the system.

The access floor contractor shall submit details and descriptive notes for finished components, anchoring, edge details and interfaces with adjoining work.

SAMPLES

The access floor contractor shall submit for approval one full-size floor panel with finished surface and understructure components for each type of access floor system being supplied.

QUALITY ASSURANCE

The access floor contractor shall submit certified laboratory test data for approval. This data will demonstrate that the Product & System Requirements under Part 2, the Performance Requirements under Part 3 and the Test Methods under Part 4 of this specification are met.

The access floor contractor shall provide a Quality Assurance Plan, which demonstrates that the installed product meets the requirements of this specification.

2. PRODUCT & SYSTEM REQUIREMENTS

ACCESS FLOOR PANELS

The panels shall be 600mm x 600mm in size and shall be interchangeable with other panels except where cut for special conditions. The panels shall be easily removed and replaced without disturbing adjacent panels, by one person using a portable lifting device.

The panels shall consist of a 25mm thick high grade high density particle board core where the top and bottom surfaces are factory bonded with a hot-dipped galvanised steel sheet to prevent development of the environmental contaminant known as 'zinc whiskers'.

The panels shall be rigid structural assemblies, fabricated to size with a size and squareness tolerance of ±0.25mm and a flatness tolerance of ±0.3mm measured on a diagonal across the top of the panel.

UNDERSTRUCTURE SYSTEM

The understructure system shall consist of steel pedestal base and head assemblies fabricated with the manufacturers standard corrosive resistant finishes. All components are to be factory assembled. Pedestal bases shall be no less than 10,000 mm² in foot print area.

The assembly shall be fabricated with sufficient height to provide the required underfloor clearances shown on the contract drawings.

For finished floor heights of 150mm and over, vertical adjustment shall be accomplished over a range of not less than ±25mm without requiring the rotation of the pedestal head.

The pedestals will be provided with a means of levelling and locking the assembly at a selected height, which requires a deliberate action to change the height setting, and which prevents vibration displacement.

The pedestal heads shall be designed to receive bolted-stringers and shall provide tapped holes to receive stringer screws so that the entire system is fully engaged as a structural membrane.

The steel stringers shall be galvanised 25mm x 25mm x 1.2mm rectangular welded tube. The stringers shall be provided with sound absorption gaskets.

ACCESSORIES

Floor Air Grilles are to be provided in locations and sizes as detailed on the contract drawings.

Service Outlets are to be provided in locations as detailed on the contract drawings. The outlets will accommodate power, communications, and data signals.

The access floor contractor shall provide the standard steps, ramps, and fascias in locations and as detailed on the contract drawings.

The access floor contractor shall provide ..... spare floors panels and ..... square metres of understructure system for each type used in the project for maintenance stock. These spares shall be delivered to the project in manufacturers standard packages clearly marked with the contents.

The access floor contractor shall provide ..... number of panel lifting devices.

Other accessories to be provided by the access floor contractor should be listed and defined here.

3. PERFORMANCE REQUIREMENTS

The access floor system shall meet or exceed all of the Specific Performance Requirements set out below:

GENERAL

All components shall be protected against corrosion with the manufacturers standard factory applied protective finishes.

CONCENTRATED LOAD

The access floor system shall be capable of accepting a point load, over 25mm x 25mm area, of 4.5 kN with a maximum deflection of 2.4mm.

ROLLING LOADS

The access floor system shall sustain the following rolling loads with a maximum total permanent deformation of 1.0mm in the top surface based on the following dynamic load tests:

• 4.4 kN for 10 passes - ø75mm x 45mm wheel.

• 2.7 kN for 10,000 passes - ø150mm x 50mm wheel.

ULTIMATE LOAD

The access floor system shall accept 13.5 kN point load over 25mm x 25mm area without collapse.

IMPACT LOAD

An impact load imposed on the access floor system by dropping a 45 kg mass from 900mm height onto a 25mm x 25mm square indentor shall not cause structural failure.

PEDESTAL LOAD

The support pedestals shall individually be capable of sustaining a 22.5 kN axial load for five minutes without loss of function or structural failure.

ELECTRICAL RESISTANCE

The total access floor understructure system shall provide electrical continuity with maximum resistance of any component to mains earth of 1 ohm as required under AS 3000 1986 5.3.2.1.

Both surface and bulk electrostatic resistance shall fall in the range of 5×10^5 and 2×10^{10} Ohms.

DIMENSIONAL TOLERANCES

Panel squareness shall be within ±0.25mm. Panel dimensions shall be within ±0.25mm of nominal size. Concavity or convexity of panels shall not exceed 0.75mm.

FIRE HAZARD

The panels, without floor coverings, shall provide zero indices for Ignitability, Spread of Flame, Heat Evolved and a maximum index of 3 for Smoke Developed. These indices shall not change when the panel is cut.

OCCUPATIONAL HEALTH & SAFETY

The access floor system shall not include any toxic substances that could prove harmful to building occupants, nor shall it create dust or contaminants that are harmful to personnel or equipment.

PANEL WEIGHT

The panel shall not exceed 8.0 kg in weight.

4. QUALITY ASSURANCE & TEST METHODS

The access floor manufacturer shall demonstrate the existence of a fully documented quality assurance program specifically established to ensure product performance required in Part 3 of this specification.

In addition, the access floor contractor shall provide certification of the Performance Requirements set out herein, on randomly selected, standard product using Test Methods summarised below.

CONCENTRATED LOAD

Test Method Section I CISCA (Ceilings and Interior Systems Construction Association) "Recommended Test Procedures for Access Floors" 1987 (USA).

ROLLING LOADS

Test Method Section III CISCA (Ceilings and Interior Systems Construction Association) "Recommended Test Procedures for Access Floors" 1987 (USA).

ULTIMATE LOADS

Test Method Section II CISCA.

IMPACT LOAD

A canvas bag of nominal diameter 300mm shall be dropped from a clear height of 900mm onto a 19mm thick timber spreader on 25 x 25mm indentor placed on the panel under the spreader. Tests shall be conducted at the centre of the panel and the centre of edge of panel. Panels shall be mounted in specified understructure for the test. Failure is defined as the point at which the system collapsed.

PEDESTAL LOAD

Test Method Section V CISCA "Pedestal Axial Load Test".

DIMENSIONAL TOLERANCES

Test Methods T1.00, T2.00 and T3.00 PSA MOB 08-8011 1985 (UK).

FIRE HAZARD

Test Method and Australian Standard AS 1530 Part 3.

ELECTROSTATIC RESISTANCE

Test Method Appendix E - AS 2834 or NFPA 99 test method modified for access floors.

5. SITE & INSTALLATION

QUALIFICATION

The access floor system and accessories to be installed by the manufacturer's authorised representative to maintain the integrity of the products and acceptable performance of the completed installation.

INSPECTION

Examine the sub-floor for unevenness, irregularities and dampness that could effect the quality and execution of the work.

Do not proceed with installation until the sub-floor surface is clean, dry, clear of the other trades and ready to receive access flooring.

PREPARATION & INSTALLATION

The access floor is to be prepared and installed in accordance with the access floor manufacturer's instructions, covering preparation, layout, alignment, and installation.

LEVEL & FIT

The installed access floor shall be level within ±1.5mm in 3 metres or ±3.0mm over the entire floor and shall be rigid and free of rocking panels.

The perimeter fit of cut panels around perimeters, columns and other such structures shall have a maximum gap of 2mm but the system shall not rely for its lateral stability on such structures.

EDGE TREATMENT

Cut edges of panels shall be sealed in accordance with the access floor manufacturer's instructions.

ADJUST AND CLEAN

The access floor contractor shall remove access floor installation debris as work progresses, maintaining the area under finished panels in a clean condition.

The general contractor/builder will provide protection to the finished access floor to prevent damage from misuse.

MAINTENANCE AND HAND-OVER

On completion the access floor contractor shall provide a 'Care and Maintenance Manual' which shall provide clear instruction for maintenance personnel in the safe use, cleaning and application of the access floor.